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<b>(71) Applicant (for all designated States except US):</b> GEMINI RESEARCH LIMITED [GB/GB]; 162 Science Park, Milton Road, Cambridge CB4 4GH (GB).			
<b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> SPECTOR, Timothy, David [GB/GB]; St Thomas' Hospital, Twin Research & Genetic Epidemiology Unit, Lambeth Palace Road, London SE1 7EH (GB). KEEN, Richard, William [GB/GB]; St Thomas' Hospital, Twin Research & Genetic Epidemiology Unit, Lambeth Palace Road, London SE1 7EH (GB). GIBSON, Fernando [GB/GB]; Gemini Research Limited, 162 Science park, Milton Road, Cambridge CB4 4GH (GB). MOLLOY, Helen, Ruth [GB/GB]; Gemini Research Limited, 162 Science Park, Milton Road, Cambridge CB4 4GH (GB).		<b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
<b>(74) Agents:</b> SCHLICH, George, William et al.; Mathys & Squire, 100 Gray's Inn Road, London WC1X 8AL (GB).			

**(54) Title:** POLYMORPHISM IN A TGF-SS GENE CORRELATED TO OSTEOPOROSIS**(57) Abstract**

Methods and apparatus for diagnosis of disease and predisposition to disease are described. In particular, methods for diagnosis of osteoporosis and determination of bone mineral density in individuals are provided as well as treatments and therapies for delaying and preventing the onset of disease in at-risk individuals.